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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/716,573 | 11/19/2003 | Paul A. LaBerge | MCT.0066C1US | 6287 |

7590 07/15/2004

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| EXAMINER |
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CERULLO, JEREMY S

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| ART UNIT | PAPER NUMBER |
|----------|--------------|

2112

DATE MAILED: 07/15/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|--------------------------------------|---|--|
| Office Action Summary | Application No. 10/716,573 | Applicant(s) LABERGE, PAUL A. | |
| | Examiner Jeremy S. Cerullo | Art Unit 2112 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 25-37 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1 and 25-37 is/are rejected.
- 7) ☒ Claim(s) 30 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 November 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date ____ | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Drawings

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: 43 and 45. Corrected drawing sheets, or amendment to the specification to add the reference character(s) in the description, are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

2. The disclosure is objected to because of the following informalities: In the summary of the invention, the first two embodiments are inconsistent with the rest of the specification. A suggested correction for the first paragraph of the summary would be to change "preventing a second bus agent" on page 2, line 8 to "preventing the first bus agent".

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3. The second embodiment described also needs correction. As written, in this embodiment the second bus agent is prevented from accessing the bus both inside and outside the windows of time. This would lead to starvation of the second bus agent and is not a practical arbitration scheme.

Appropriate correction is required.

4. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Claim Objections

5. Claim 30 is objected to because of the following informalities: In the first line of claim 30, "the act monitoring" should apparently be "the act of monitoring". Appropriate correction is required.

Claim Rejections - 35 USC § 112

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 27 and 32 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

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8. Claim 27 recites the limitation "the second bus agent" in the first line of the claim. There is insufficient antecedent basis for this limitation in the claim. For the purposes of applying prior art, a "second bus agent" is interpreted as a bus agent that is not denied requests to access the bus outside of said windows of time, as per the specification.

9. Claim 32 contains the trademark/trade name Pentium Pro. Where a trademark or trade name is used in a claim as a limitation to identify or describe a particular material or product, the claim does not comply with the requirements of 35 U.S.C. 112, second paragraph. See *Ex parte Simpson*, 218 USPQ 1020 (Bd. App. 1982). The claim scope is uncertain since the trademark or trade name cannot be used properly to identify any particular material or product. A trademark or trade name is used to identify a source of goods, and not the goods themselves. Thus, a trademark or trade name does not identify or describe the goods associated with the trademark or trade name. In the present case, the trademark/trade name is used to identify/describe a Pentium Pro bus and, accordingly, the identification/description is indefinite.

Double Patenting

10. A rejection based on double patenting of the "same invention" type finds its support in the language of 35 U.S.C. 101 which states that "whoever invents or discovers any new and useful process ... may obtain a patent therefor ..." (Emphasis added). Thus, the term "same invention," in this context, means an invention drawn to identical subject matter. See *Miller v. Eagle Mfg. Co.*, 151 U.S. 186 (1894); *In re Ockert*, 245 F.2d 467, 114 USPQ 330 (CCPA 1957); and *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970).

A statutory type (35 U.S.C. 101) double patenting rejection can be overcome by canceling or amending the conflicting claims so they are no longer coextensive in

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scope. The filing of a terminal disclaimer cannot overcome a double patenting rejection based upon 35 U.S.C. 101.

11. Claim 1 rejected under 35 U.S.C. 101 as claiming the same invention as that of claim 1 of prior U.S. Patent No. 6654833. This is a double patenting rejection.

12. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

13. Claims 25-32 rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-8 of U.S. Patent No. 6,654,833. Although the conflicting claims are not identical, they are not patentably distinct from each other because claims 1-8 of U.S. Patent No. 6,654,833 contain every element of claims 25-32 of the instant application and as such anticipate claims 25-32 of the instant application.

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14. Claim 1 of U.S. Patent No. 6,654,833 contains the following elements of claims 25-32 of the instant application and as such anticipates claim 25 of the instant application: windows of time for a first bus agent to request access to a bus (Patent Claim 1, lines 2-3); denying all requests from the first bus agent to access the bus for times outside those windows (Patent Claim 1, lines 3-4); monitoring accesses to the bus during the windows (Patent Claim 1, lines 7-8); and selectively regulating durations of the windows in response to the monitoring (Patent Claim 1, lines 9-10).

15. Claim 2 of U.S. Patent No. 6,654,833 contains the following additional element of claim 26 of the instant application and as such anticipates claim 26 of the instant application: the first bus agent comprises: a system controller (Patent Claim 2, lines 1-3).

16. Claim 3 of U.S. Patent No. 6,654,833 contains the following additional element of claim 27 of the instant application and as such anticipates claim 27 of the instant application: the second bus agent comprises: a processor (Patent Claim 3, lines 1-3).

17. Claim 4 of U.S. Patent No. 6,654,833 contains the following additional element of claim 28 of the instant application and as such anticipates claim 28 of the instant application: the act of monitoring comprises: determining a number of clock cycles in which first bus agent accesses the bus during the window (Patent Claim 4, lines 1-4).

18. Claim 5 of U.S. Patent No. 6,654,833 contains the following additional element of claim 29 of the instant application and as such anticipates claim 29 of the instant application: the act of regulating comprises: determining the duration of one of the windows if the amount of use by the first bus agent approximately increases above a threshold (Patent Claim 5, lines 1-5).

19. Claim 6 of U.S. Patent No. 6,654,833 contains the following additional element of claim 30 of the instant application and as such anticipates claim 30 of the instant application: the act of monitoring comprises: counting clock cycles when the first bus agent requests ownership of the bus (Patent Claim 6, lines 1-4).

20. Claim 7 of U.S. Patent No. 6,654,833 contains the following additional element of claim 31 of the instant application and as such anticipates claim 31 of the instant application: the bus comprises: a local bus (Patent Claim 7, lines 1-2).

21. Claim 8 of U.S. Patent No. 6,654,833 contains the following additional element of claim 32 of the instant application and as such anticipates claim 32 of the instant application: the bus comprises: a Pentium Pro bus (Patent Claim 8, lines 1-2).

22. Claims 33-37 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 9-12 of U.S. Patent No. 6,654,833 in view of Guthrie et al.

23. Claim 9 of U.S. Patent No. 6,654,833 contains the following elements of claim 33, 34 of the instant application: a first bus agent (system controller) that has higher priority for accesses to a bus than a second bus agent (processor) (Patent Claim 9, lines 4-6); a circuit (Patent Claim 9, line 7) adapted to permit the first agent (system controller) to access the bus during windows of time and prevent the first bus agent (system controller) from accessing the bus outside the windows of time to permit the second bus agent (processor) to access the bus (Patent Claim 9, lines 8-11), monitor the use of the bus by the first bus agent (system controller) during the windows (Patent Claim 9, lines 12-13), and selectively regulate the durations of the windows in response to the monitored use (Patent Claim 9, lines 14-15). The claims of U.S. Patent No. 6,654,833 do not contain the element of a bridge comprising the aforementioned circuit. Guthrie teaches the use of a bridge that comprises an arbiter (FIG 3). At the time of the invention it would have been obvious to a person of ordinary skill in the art to use the bridge of Guthrie to contain the arbitration circuit of LaBerge. The motivation for doing so would have been placing the arbiter circuit within the bridge would reduce the amount of connections to the bus. Therefore, claim 9 of U.S. Patent No. 6,654,833 (LaBerge) and U.S. Patent No. 5,784,576 (Guthrie et al.) contain every element of claims 33 and 34 of the instant application and as such anticipate claims 33 and 34 of the instant application.

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24. Claim 10 of U.S. Patent No. 6,654,833 contains the following additional element of claim 35 of the instant application and as such anticipates claim 35 of the instant application: the circuit comprises: a timer adapted to determine a number of clock cycles in which the first bus agent (system controller) accesses the bus during one of the windows (Patent Claim 10, lines 1-5).

25. Claim 11 of U.S. Patent No. 6,654,833 contains the following additional element of claim 36 of the instant application and as such anticipates claim 36 of the instant application: the circuit is adapted to regulate the durations by decreasing the duration of one of the windows if the amount of use of the bus by the first bus agent (system controller) approximately increases above a threshold (Patent Claim 11, lines 1-5).

26. Claim 12 of U.S. Patent No. 6,654,833 contains the following additional element of claim 37 of the instant application and as such anticipates claim 37 of the instant application: the circuit comprises: a timer adapted to not count clock cycles when the second bus agent (processor) and count clock cycles when the first bus agent (system controller) accesses the bus (Patent Claim 12, lines 1-5).

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Conclusion

27. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. U.S. Patents 4,969,120, 5,241,632, 5,499,345, 5,560,016, 5,581,782, 5,740,380, 5,822,549, 5,845,097, 5,905,878, 5,948,094, 6,058,450, and 6,145,040 were considered in the examination of the parent application, now U.S. Patent No. 6,654,833, and were further considered during the examination of the instant application. U.S. Patents 5,444,855 (Thompson), 4,922,244 (Hullett et al.), 5,784,576 (Guthrie et al.), 5,710,891 (Normoyle et al.), and 5,168,568 (Thayer et al.) were also considered by the examiner as related art, but they do not anticipate and are not obvious over the instant application.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeremy S. Cerullo whose telephone number is (703) 305-6435. The examiner can normally be reached on Monday - Thursday, 6:45-4:15; Alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark H. Rinehart can be reached on (703) 305-4815. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JSC

Jeremy S. Cerullo
Patent Examiner
Art Unit 2112

A handwritten signature in black ink, consisting of several overlapping loops and a long horizontal stroke at the end, likely representing the name Mark H. Rinehart.

MARK H. RINEHART
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100